

$M \times N$  image

$\frac{M}{2} \times \frac{N}{2}$  image

compressed data

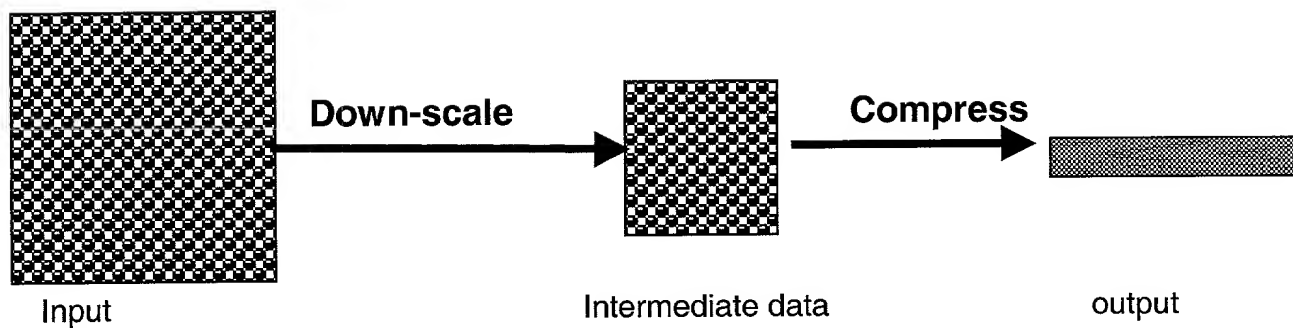


Figure 1

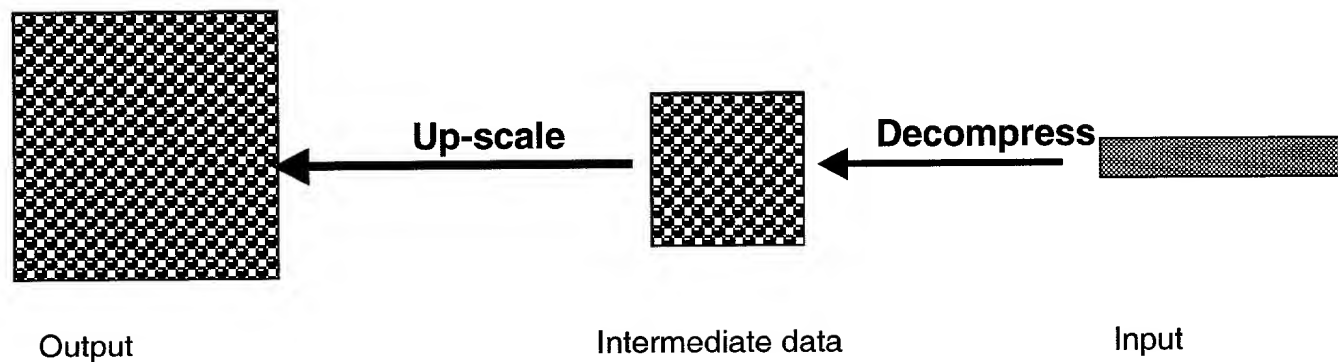


Figure 2

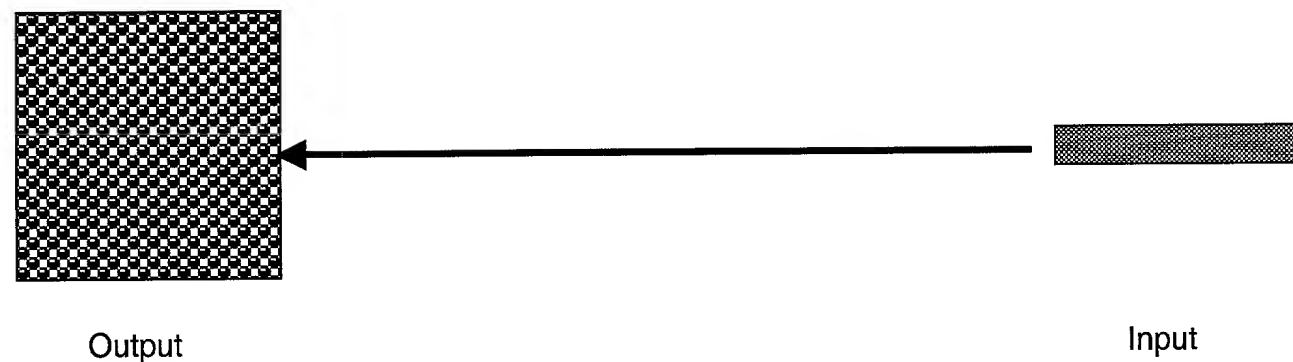
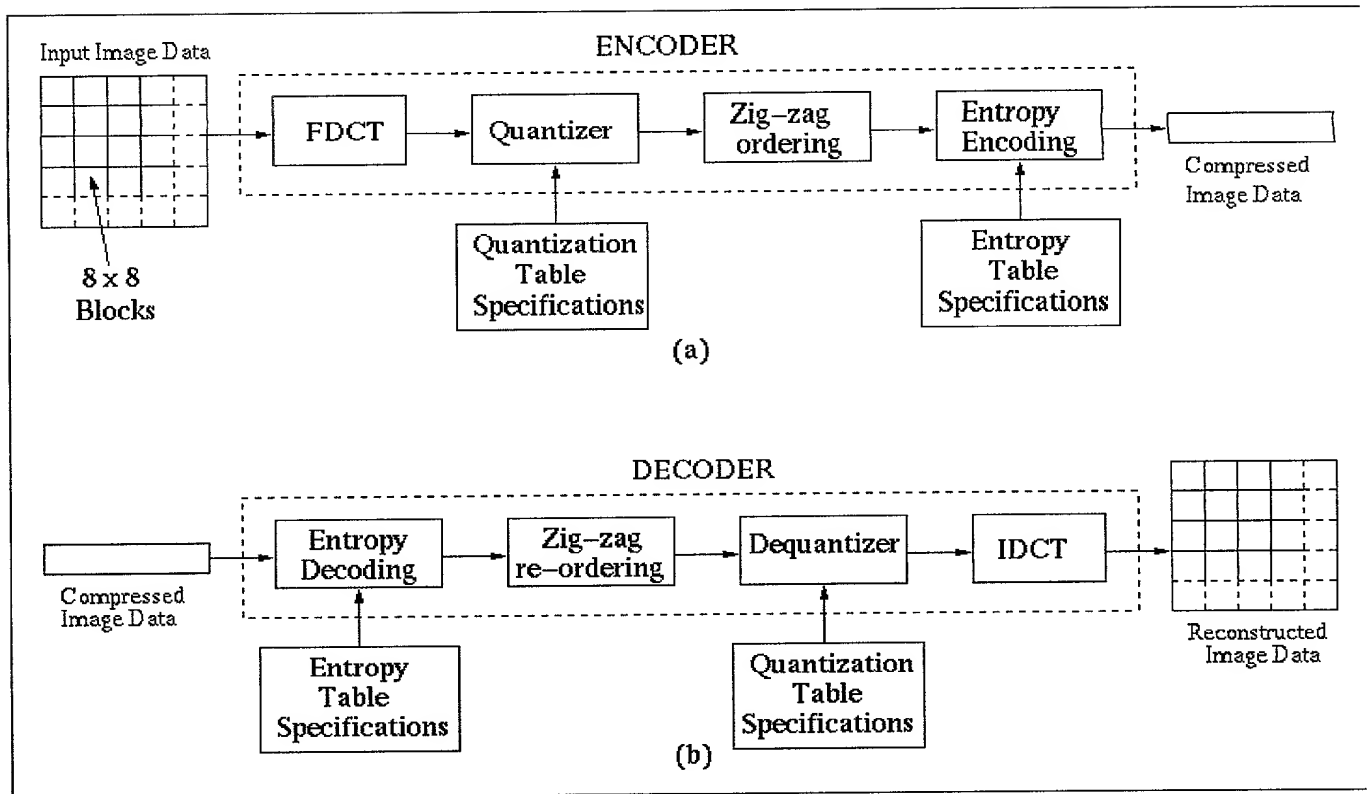
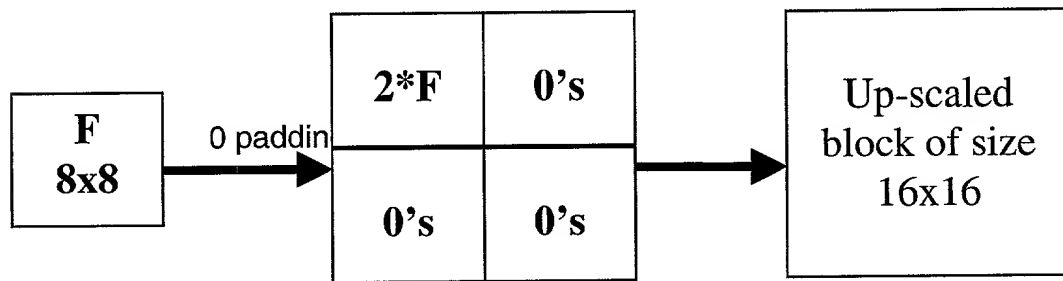


Figure 3



**Figure 4**



**Figure 5**

$$\begin{bmatrix} F(0,0) & F(0,1) & \dots & F(0,7) \\ F(1,0) & F(1,1) & \dots & F(1,7) \\ \vdots & \vdots & \ddots & \vdots \\ F(7,0) & F(7,1) & \dots & F(7,7) \end{bmatrix} \Rightarrow \begin{bmatrix} 1.25F(0,0) & 1.25F(0,1) & \dots & 1.25F(0,7) & 0 & 0 \\ 1.25F(1,0) & 1.25F(1,1) & \dots & 1.25F(1,7) & 0 & 0 \\ \vdots & \vdots & \ddots & \vdots & 0 & 0 \\ 1.25F(7,0) & 1.25F(7,1) & \dots & 1.25F(7,7) & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

**Figure 6**